

Serial Number: 09/813,198A

CRF Processing Date: 7/31/2002  
Edited by: JK  
Verified by: JK (STIC staff) Changed a file from non-ASCII to ASCII**ENTERED** Changed the margins in cases where the sequence text was "wrapped" down to the next line. PTH Edited a format error in the Current Application Data section, specifically: Edited the Current Application Data section with the actual current number. The number inputted by the applicant was  the prior application data; or  other \_\_\_\_\_ Added the mandatory heading and subheadings for "Current Application Data". Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer. Changed the spelling of a mandatory field (the headings or subheadings), specifically: Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place. Inserted colons after headings/subheadings. Headings edited included: Deleted extra, invalid, headings used by an applicant, specifically: Deleted:  non-ASCII "garbage" at the beginning/end of files;  secretary initials/filename at end of file;  
 page numbers throughout text;  other invalid text, such as \_\_\_\_\_ Inserted mandatory headings, specifically: **RECEIVED** Corrected an obvious error in the response, specifically:

AUG 06 2002

 Edited identifiers where upper case is used but lower case is required, or vice versa.

TECH CENTER 1600/2900

 Corrected an error in the Number of Sequences field, specifically: A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted. Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected:

Other:

globally deleted format markers and inserted hard returns



1600

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/817,198A

DATE: 07/31/2002  
TIME: 18:54:19

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\07312002\I817198A.raw

4 <110> APPLICANT: YE, Jane et al.  
 6 <120> TITLE OF INVENTION: ISOLATED HUMAN RAS-LIKE PROTEINS,  
 7 NUCLEIC ACID MOLECULES ENCODING THESE HUMAN RAS-LIKE  
 8 PROTEINS, AND USES THEREOF  
 10 <130> FILE REFERENCE: CL001188  
 12 <140> CURRENT APPLICATION NUMBER: 09/817,198A  
 13 <141> CURRENT FILING DATE: 2001-03-27  
 15 <160> NUMBER OF SEQ ID NOS: 33  
 17 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 19 <210> SEQ ID NO: 1  
 20 <211> LENGTH: 3257  
 21 <212> TYPE: DNA  
 22 <213> ORGANISM: Human  
 24 <400> SEQUENCE: 1  
 25 tgcccgctgc ccgccccgag ttccccggccc cgctggccccc agtcatggcg aagcagtacg 60  
 26 atgtgctgtt ccggctgctg ctgatcgaaa actccgggggt gggcaagacc tgcctgctgt 120  
 27 gccgcttcac cgacaacgag ttccactccct cgcacatctc caccatcggt gttgacttta 180  
 28 agatgaagac catagaggtt gacggcatca aagtgcggat acagatctgg gacactgcag 240  
 29 ggcaggagag ataccagacc atcacaaaggc agtactatcg gcggggcccaag gggatatttt 300  
 30 tggcttatga cattagcagc gagcgctctt accagcacat catgaagtgg gtcagtgacg 360  
 31 tggatgagta cgccaccagaa ggcgtccaga agatccttat tgggataataag gctgatgagg 420  
 32 agcagaaaacg gcagggtggaa agagagcaag ggcagcagct ggcgaaggag tatggcatgg 480  
 33 acttcttatga aacaagtgcc tgcaccaacc tcaacattaa agagtcattc acgcgtctga 540  
 34 cagagctggc gctgcaggcc cataggaagg agctggaagg cctccggatg cgtgccagca 600  
 35 atgagttggc actggcagag ctggaggagg aggagggcaa accccggggc ccagcgaact 660  
 36 cttcgaaaac ctgctgggtgc tgagtccctgt gtggggcacc ccacacgaca cccctttcc 720  
 37 ctcaggagggc ccgtggcag acaggggagc cggggctttg ccctgctgct gtcctctcg 780  
 38 gtgatgaccc tattgagttt cagtagccac tactccccct gcctggccct gagagcggct 840  
 39 ctgctgtcat ctcaagcagc ccctgtcccc agcccgatcca ccctggagtg gtcttctca 900  
 40 gcctgtttcc ccagccacag gcctgctacg acccccacga tggccgcac gcaactgtctc 960  
 41 accatcccgc acccaccaga caacagccag ggctggagtc caggccactt tcagctgctc 1020  
 42 ctttctccgt gcatcggtc ttttctctgc tttttctctc ttccccact tcttttctc 1080  
 43 tgacccctcc cttccgggtgc gtttcgtatc aaagcttcctc aaaccccgcc cccctgtgt 1140  
 44 cctgctgtgt gcaagctcgct ctttccttcc ttccctaaatc atccaaagggg atggacccag 1200  
 45 gctcggtgggg aggttccacc cttggatcca ggaagaaccc tccaccctgc ctcgtgggtg 1260  
 46 ggccaaaggc tacagggtgc ttcttcctct tccccaccc ccactgtccc tcatgtgcca 1320  
 47 tggcctgccc tccccactga cctgcgaaag tggagcatcg aggttagggagg gaaacagcaa 1380  
 48 ccggggagtc ctcgagcctg gggctggccct acctctaccc attccccgac cagagctttg 1440  
 49 cccttgcttgc gctggccggcc tgccttttgc gggaaactgag ctcagaggca ggtgtttcag 1500  
 50 agaaggaaac aaaatgaggg gttggcaggaa taaaaagtca cttccattct ctacccatca 1560  
 51 tgcagcatga acacaatttc tctccacctg gctcccaaattttaaagatgt ggaccaaggc 1620  
 52 ctgtgggtac tccagggggca aggagagccc tggggtcagt gacactgtca ggccaaaccat 1680  
 53 gcaactccaca aaggggagca tttggaaatg aaggacttagc tcctatgtat caggttaaga 1740

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/817,198A

DATE: 07/31/2002  
TIME: 18:54:19

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\07312002\I817198A.raw

54 gcaagggaga gctggccagg gacagcagg tgcacagcag aggggaatgt agcaacagca 1800  
 55 gggcctccta ggcggccatct tccatttctt aggttaagaag agcatttcct cagactccca 1860  
 56 ggcggaggac tgagccatgc cttcagcaac caaggttctc ctgggaccga aagtttatgg 1920  
 57 gagaagggca aagacttcat gggaaagagag aaggaaggcc ctgggttagaa acgcttggtg 1980  
 58 ctgttctctt tggccttaa gacaaagcgc tcacattgcc ctctacccctc tgataggctt 2040  
 59 gagggttgc caaccacact gtggctacag gtggagggaa gaggactct tcctccagag 2100  
 60 tgctatgttc aggaagtttc ttaacccca tatggcccaa gagtagctcg taggaggccc 2160  
 61 tttaaagacg gaacaagtaa ttaccagg tctactgggt tcctgcccac cgtcccaagg 2220  
 62 tggcgaggc ctaggaagag ggtcattctt aagccacaca ttagctgcac tgcgtggctg 2280  
 63 cagccaaaac aaagaactgg gtgtttagta ttcatcaact aagaaccaa atccagggca 2340  
 64 ctcataatgtg aaggataaga acctcaactc cttactcctc caaaaagaag tgggaaaga 2400  
 65 accatcaaac cttccctcct gacttaccaa accaggaaaa cagcaggaga gggttggctca 2460  
 66 ggacttaggg acagggtata gcttagatgg tggaaagcaa aggagagcag gaagttgtaa 2520  
 67 atcactggct aatgagaaaa ggagacagct aactctagga tgaagctgtg actaggctgg 2580  
 68 agttgcttcc ttgaagatgg gactccttgg gtataaagac ctatgccaca tcacactgg 2640  
 69 gctagggaaag taggtgatgc cagccctcaa gtctgttcc agccaggac ttgagaagtt 2700  
 70 atattggca gtggctccaa tctgtggacc agtatttcag cttccctga agatcaggca 2760  
 71 ggggccatt cattgtcttt ctctccttagc cccctcagga aagaaggact atattgtac 2820  
 72 tgcgttccat gggttcttgg agggaaaaca tggaaatcagg attctataga ctgataggcc 2880  
 73 ctatccacaa gggccatgac tggaaaagg tatggagca gaaggagaat tggatttta 2940  
 74 ggggtgcagct acgctcaccc taaacttttgg tggccttgg gcattgtctg aggcccagac 3000  
 75 tggtaagcag gctctgttgg cctgtttact cgtcaccacc tctgcacccctg ctgtcttgg 3060  
 76 actccatcca gccccaggca cgccacctgc tcctgagcct ccactatctc cctgtgacgg 3120  
 77 gtgaacttcg tgcgttggccat tataatggat gtgagcagggttcatctatt 3180  
 78 tttaaacacag atgttacaa aataaagatt atttcaaacc accaaaaaaaaaaaaaaa 3240  
 79 aaaaaaaaaa aaaaaaaaaa 3257

81 <210> SEQ ID NO: 2

82 <211> LENGTH: 212

83 <212> TYPE: PRT

84 <213> ORGANISM: Human

86 <400> SEQUENCE: 2

87	Met	Ala	Lys	Gln	Tyr	Asp	Val	Leu	Phe	Arg	Leu	Leu	Ile	Gly	Asp	
88	1				5				10				15			
89	Ser	Gly	Val	Gly	Lys	Thr	Cys	Leu	Leu	Cys	Arg	Phe	Thr	Asp	Asn	Glu
90					20				25				30			
91	Phe	His	Ser	Ser	His	Ile	Ser	Thr	Ile	Gly	Val	Asp	Phe	Lys	Met	Lys
92					35				40				45			
93	Thr	Ile	Glu	Val	Asp	Gly	Ile	Lys	Val	Arg	Ile	Gln	Ile	Trp	Asp	Thr
94					50				55				60			
95	Ala	Gly	Gln	Glu	Arg	Tyr	Gln	Thr	Ile	Thr	Lys	Gln	Tyr	Tyr	Arg	Arg
96	65				70				75				80			
97	Ala	Gln	Gly	Ile	Phe	Leu	Val	Tyr	Asp	Ile	Ser	Ser	Glu	Arg	Ser	Tyr
98					85				90				95			
99	Gln	His	Ile	Met	Lys	Trp	Val	Ser	Asp	Val	Asp	Glu	Tyr	Ala	Pro	Glu
100					100				105				110			
101	Gly	Val	Gln	Lys	Ile	Leu	Ile	Gly	Asn	Lys	Ala	Asp	Glu	Glu	Gln	Lys
102					115				120				125			
103	Arg	Gln	Val	Gly	Arg	Glu	Gln	Gly	Gln	Gln	Leu	Ala	Lys	Glu	Tyr	Gly
104					130				135				140			

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/817,198A

DATE: 07/31/2002  
TIME: 18:54:19

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\07312002\I817198A.raw

```

105 Met Asp Phe Tyr Glu Thr Ser Ala Cys Thr Asn Leu Asn Ile Lys Glu
106 145 150 155 160
107 Ser Phe Thr Arg Leu Thr Glu Leu Val Leu Gln Ala His Arg Lys Glu
108 165 170 175
109 Leu Glu Gly Leu Arg Met Arg Ala Ser Asn Glu Leu Ala Leu Ala Glu
110 180 185 190
111 Leu Glu Glu Glu Gly Lys Pro Glu Gly Pro Ala Asn Ser Ser Lys
112 195 200 205
113 Thr Cys Trp Cys
114 210
117 <210> SEQ ID NO: 3
118 <211> LENGTH: 28770
119 <212> TYPE: DNA
120 <213> ORGANISM: Human
122 <400> SEQUENCE: 3
123 gctcaagatt gcacagctgg tgagtggta cactggact ggaacccaag tgcgtttac 60
124 tccagagccc ttggcatgca cctgaaaccc catgttaagcc cactgtggag acgcgcaccc 120
125 cggaaataatg gaatccacta catcagttcc tttagcttcc tgcgtaatca gagtagctag 180
126 caggctcggtt atttcgcccc ccggctttt tttttttttt tttttgagac agagtttgc 240
127 tcttggcc caggctggag tgcaatggcg caatctcgcc tcaccgcaac cttccctct 300
128 caggttcaag caatttcct gcctcagcct cccgagtagc tgggattaca ggcacccggcc 360
129 accacgccc gctaattttt ttatattttt agtagagatg gggtttccacc atgttggcca 420
130 ggctggctt gaactttcc ccttttattta taattcagac acttaacctg aaatatacct 480
131 tttcaaatga agtaaatggg cttaccattt tccttgacct actattgaaa aatacattct 540
132 ccatccaata ttcagcctgaa aacaggtat gtacatataat acttttcatt gctttttttt 600
133 tttttttttt gagacaaggt ctccctctgt tgcgcaggct ggagtgcagt gtcatgatct 660
134 cggctactg cagcctccc ctaatgggtt caagaatcc tcccacccca gcctctcaag 720
135 cctgggattt caggcgagcc accgtgccc gctaattttt ttttattttt agtagagact 780
136 gggtttcaact acattggcca ggctggctc cagtcctgaa cctcaaaatg atctgcccgc 840
137 ctcagcctcc caaagactg ggattacagg catgagccaa cgcgccttagc ctttcattgc 900
138 tttttaaaga cctaataaggc tagactttgc tctccctcaa tactcgttgg tagggatagg 960
139 caatttctc aactccggag agcattcatt tgcctctc cggtgctaac acattcgtg 1020
140 gtaggaaact ggatcttggaa caagggccat tcatttttgc tgccactgg ctataaccaca 1080
141 gagaattta ggggtctgaa acaatacatt ggtcacctgg gcacccatcc taagcacctt 1140
142 agagggaaaa cggagacttg cccgcacacc tctaaaggat tttgcacttg gagatgttct 1200
143 tatggccatc tatctttca ccctggtgaa ggccgtgaat aggcattttcc cccatttaaa 1260
144 gaaaaaatgg ggacgggggaa gggccgtgac acagtcacac aggttaagggg cagccagatg 1320
145 gcaggggaggg ggaattccac ccacactctc ggggactcat ggagacgggt gttcaatcc 1380
146 agatcctgct caaggccttc ctacctcggt tgagcccgac tgaggtacca gccactgggg 1440
147 agccccggca gatcctgca gatcgggtt ccacggcggtt cggaaattacc ggcggccagac 1500
148 ttgggggtggg atatggggag aagtggtgag cccggaaagc ggagacccgtt agaagtggc 1560
149 tgggtggggg ctcaccccaa ctccccccatt cggagcgctcc gggggaaaac gaaaacgttc 1620
150 ccccgcccccg ggcaggaagg ggttgggagg gggggctggc gccccggcccc agcgtcgct 1680
151 gtcgatggg gtcccgctc ctcgcgcgca ctccccggcc cctctctacc gggggcgccgg 1740
152 cggcgccgca ggggaagggg cgggcagggg cgcgcggccgg tttccctcc caccgcctcg 1800
153 cgccagccca gccgagccga gccgagccga gcggggccgg cgccgggttc cccggcgccg 1860
154 cgcgttccc ggcacccagc gagcgtggc gcaggccggc gggcgagcga gccgcgggggg 1920
155 cggggcccg gtcctccctc ggcggccgca gctgtccccgg gggggcgccgg gccgcgttg 1980
156 cagcqgcqqa qcaggqctqa qccccqctqcc cgcggccqcaq tcccgqccccq gctqqcccc 2040

```

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/817,198A

DATE: 07/31/2002  
TIME: 18:54:19

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\07312002\I817198A.raw

```

157 gtcatggcga agcagtaga tggctgttc cggctgctgc tgatcgaaaa ctccggggtg 2100
158 ggcaagaccc gcctgctgtc ccgccttccacc gacaacgagt tccactcctc gcacatctcc 2160
159 accatcggtt aaaaaaaaaaaaaaaa gcccggggcg cccctccctc cccggcccg gcccctttcc 2220
160 cccggccccc cgtccccccagc tggggagggaa ttgcagcccc ctccggctgg aggccgtggc 2280
161 gccggaggcc ggagtccggg ataaatctcg gggtagccat aggttttgc aggtgagggt 2340
162 gtccctgtc cctgcgtcc ggaccagggg tgggtctcc cgcctctgc cggaaagcc 2400
163 tccgtcccat caaaccgaga aaccgggggt gaggggagct ggttaggcc tggtagcccc 2460
164 gagctggggt agcaagaatc gttagccgtc gaataacacc cccacacccc cagggggagg 2520
165 ggaagtaaag cttctgtac ggaaaagggg gtcagggtgg agaccggagt cactgaggcg 2580
166 cccttggttc tgggtgacc caaggtggag cccgggggg gcgagggggg gaagagagga 2640
167 cgtacggagg ggccacacagg atcgatgtt caggccagag ttggaaaggt aagccgcaag 2700
168 gtgggacacc tggggagga cacagatagg gtgaggagcc cctgcgcctg ggaagaggag 2760
169 acatctgtt ctagggaggc taaagaggat ggaggagtgt caggaatacc tgcccagacc 2820
170 aaggggtcag aaggcaggca ggaccggct gaggccatct ctcatctggc agtgcgtggag 2880
171 cctgtggta gaggacaag accgggtggc atccagaca gcactatgtat ggggtcaactt 2940
172 attctaggaa tgggtccatg gcctccctc tgagacagtc agtctccgc ttctaggctg 3000
173 tgagggggcc cctccctgag aagtctgagt aggggaatt tcatcctcag ctgctacccg 3060
174 ggtcagccct ggagtagccct ctgcattgcc caagccctg gaaaacactg ctggctggct 3120
175 ggtcatccat ttggaaatgct ctcctagaag tccctgtc catcaggat gggcaccaggc 3180
176 tctcagcttc ctctttagga ttcatgtcca caccatcccc cctccccca acacacattc 3240
177 ctgtctgaga gagaagtagg agcagataga tacagccagg aggaacagaa ccttctgggt 3300
178 aagaagccag ctttattgtc caagagaccc gagacccatc tgggggcaa agcaaccc 3360
179 aatattgcct aaactctga gctttattta gtttctcatt tggaaacgg gtataataat 3420
180 tgcacctacc tgccaaatgg tggcaagat taaatgagat aacgattgtt aagtgccttag 3480
181 cacagccaga cacatggta agctcgataa atgctgattt ttcttactgc tattgccatt 3540
182 atcattgagc ttttagggtc tcctctctt gtttccacca cttgaagggt gaaaacaacag 3600
183 gacttagggt cagggaaacag aacttgcctg tctttctcag aggagctgtt agggcaactc 3660
184 ttaggaaacc caggagctt ggcgtggcc tgggtttggat gagagacatt gcagaaagaa 3720
185 ggggagccata tagacactaa ggcttgcctg ctggccggag gacttgggg agagggcaggt 3780
186 gcaggagaaa ggcatggcg tggatggagga agtggcagag gaaccagatg gtgtatgagg 3840
187 acaggttgc ggctcaggga caaaggccgg tgggttatcc cttaaaggaaa ctaggatgtgg 3900
188 ctattttgg gagaggccctg gtgcctggaa ctactgagct atctccagag agctgtggc 3960
189 tgcctggag gcccctggctt tggcctgaag agctgtgtt tgcacctgtc ctcttagtcc 4020
190 cattccaagt cctataggtt acatggactt ttccctttaa gggcttcat caaccaccc 4080
191 atttcagaag ctctggact ctcgtttagt gctgtggag gcagcccttcc ctgggagaca 4140
192 cataccctcc tttttggaggg cacccttctt tctaaaatac caggatggcc ctctgaggct 4200
193 cgtctctcc taaaagagag tccattgcct cacacccatc atcatccacc ctctccctt 4260
194 tccctccccc ttgtaatctc ctttcttgc taataggttga acactaaata 4320
195 ggtcacaggg acttcctgaa accctccagg gcagaccact ttgggcacat aggtgaatca 4380
196 gtgaactgag taggggtgtc tctgcagcac tgcgtccctt caaggccctt ggtatattgg 4440
197 cttaaaaccc aaagatggct cccagattt ttcctccgt tctgacacccc gggccctt 4500
198 ttctacagga cacagaggat tctctagggt cccctttcc acaggacaca gaggactcta 4560
199 ggagtttggaa ttccatggaa tagaaagaaa cctgtcttcc ttccacccag ccttttaaaa 4620
200 tctggcccac tgggtatctt aatgcttcc ttatataag cttatataagg gacttggat 4680
201 tctcccttat ttggcgtt tttttcagca ttaactaaaa cttaaaggaa agagttggat 4740
202 ggtcaagaaa agcttttcc ttaagtgtata tggacagttt ctcaaggagg tagaaggggc 4800
203 agccaggaga caaatcaagg agccaaacgaa atgagtgtca ccaagtccata gtcattcgct 4860
204 tatttttaaa aatgcgtt cctgtatgcc aggctctgc ctgagaccga gagattccaa 4920
205 gatgaataat acctacagtc actgttctca aattgtgtcat tacctaaaac acattacatg 4980

```

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/817,198A

DATE: 07/31/2002  
TIME: 18:54:19

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\07312002\I817198A.raw

206 accatgctgg ccactgatcg aggcacctt cccagggct tttttgtga attaagaaaa 5040  
207 caaggttaatt caccagttat tgccaagata gtttggcttc ttggctcatg tggatatcac 5100  
208 ctaggccagt acttttgcgt tttactgtgt actccactt aacggcctgc gatcttctag 5160  
209 agaagaaccc gccaggggagc agtgagaggc ctccctggta gactgagaca ctgactgtcc 5220  
210 ctccccctat cctttcgtc tttctggcca gcagaccagc aggtggccct gccactggct 5280  
211 ctgccacagg catttcctt ctgtcagct gtgctggcct ggctgggggt tggtgcgaag 5340  
212 gggtccccaa aatactacct taaacaaatt aattgagcat tcactaccaa gctctgtgcc 5400  
213 aggcattttt gagacatatt gcagtctacg ttttctgccc acagaagccc ataacctaga 5460  
214 tggggaggca agacaaaggg aaaaacaaa aacaaagagc tagtgc当地 atagagatatc 5520  
215 taaaagaact tggtaatca ctcttcaaatt gtaaaggatg gattatgatc attgcagtt 5580  
216 ctcttaatga aggtctcaca gtgggtatca gaagctaaat tatgatgcaa gatgttaccat 5640  
217 gaggcagccg gagaatggcg atggatggga tgggtgagtg ctattccac gactccatgc 5700  
218 tgcggaggc tggggaaagag agaggcccgt gtggactaga accggcaggg aaggctgaag 5760  
219 ctaggcctca gtgtggcgtc ctcgtcagtt cctgcagcag aagggagcag atggagtaac 5820  
220 atgagcagag ataacagagg tgggatttag taggtgtccg tggggctcta ggcagtttag 5880  
221 atgcaacaga agggattctt cagggaaagtg agaagattct tctgtttctc tctctgtctc 5940  
222 ccaaattata agtgccttga tggtgcgacc aaatcttatt cctcattgtt tttatagtcc 6000  
223 ctagtacagg gccaggcaga ttcaatgcct gttgttaat taatgaatga atgcagggac 6060  
224 cagttggcag agggcattga gaggcctggcc aaggaggtgg aacatgagcc ttagcaatgg 6120  
225 taggaggggt tttgagtagg gtactaatga gtttggctgg aagaaggggt taagacttga 6180  
226 agcagggaga ctagtcaggg gctgcagtag tatectggc atgaaggaac ctctgaatgg 6240  
227 cccctcaccc ccagtggtac caacaccaac ttccacacag tcagttttc tacttccct 6300  
228 ccagaatggg gagggttca agccaatcaa cctggcaact tctgaaagaa tcttatggga 6360  
229 cctgtccat gaccaggtag ggagaagatg tcatacatgg acatctatgt tcaggggacc 6420  
230 tttgaggacc tttctgcatt gtggccagga gtgagatgat gtaaaccaca aatggaaact 6480  
231 gaagagactg ctcaggagtt gttggtttc ttttctttc tattttttt ttttgagac 6540  
232 taggttcac tctgtcaccc agtctggagt gtgggttgg cacaatcacg gctcaactgca 6600  
233 gcctcgatct cctaaacgca atcctccac ctcagcctct caagtagctg ggactacagg 6660  
234 tgcattccac cacattcage taatgtttt acgtttgtt gagatgggggt ttcactatgt 6720  
235 tgaccaggct ggtctcgaaat tcctggactc gtgatccacc agcctcagcc ttccaaaatg 6780  
236 ctgggattat aggcgtgagc tacctcactc cctcaggagt tgggtttctc cctccatcc 6840  
237 ttagtcttcc ctgagtagac ctgtcaccta gtccctggac cttttgtttt gaaagccacc 6900  
238 ctccaggcta cactccttct gggtagggag gagggtgatc tgggtggaca ggttggctg 6960  
239 ctgtggcttc agggacttt ctcaggctgg gttgtctgtt ctagtgcacc tttctcaagg 7020  
240 agttctgctg ggactggctt ggctgcctgt cttgactttt ctttgactg aggaggtggg 7080  
241 agatggtagag ggaggggggt gggctagatc caagcctgga atgggggtgac ctaacagaca 7140  
242 ctggggcctg tgcttagaca cttagatctt ggggtttgca gttttctaga ctgagaggag 7200  
243 ctggggccttca atgcagtgtg acgttggat agggtcagggt ctgggtctgt gtcaagccttc 7260  
244 aggcagcctg agaccagtct ctacctactc tgggtttctg gtacctagaa aggaaggaa 7320  
245 ggtgagaagc aatgagcaga atggaaagag cccagattaa catgcacatt tcccatggcc 7380  
246 ttactggccc tggcaccttca agacactttt atgacatctt tggcttcgt ttctgcatt 7440  
247 gtaaattgaa gatggtaaca gatgtttttaaaaggatgt tggtaagatt atagagccta 7500  
248 ggcgcataaa agcacttggc agagccctcg ataaaaataat agctgcatac atattatcat 7560  
249 tattattatt ttattttattt atttattttt tttttttttaa gaccgagttt ctctctgtcg 7620  
250 cccaggctgg agtgcagttgg cacaatctcg gctcaactgca acctccatct cccgggttta 7680  
251 agtgcatttcc ctgcctcagc ctcctaagta gctgggatata cggcaccaccc 7740  
252 cggctattat tattattcct agctataaga atgctgttaga gatgaataca ctgtcagttga 7800  
253 gctaggaggtt catcctgtgtt atccatcaact tggcactca gtcgttcagg cgctatttgc 7860  
254 tgaacaccaa ctacatgcca ggtgcctatgc taagatttgg ggacacagtg gtgaccaaaaa 7920

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/817,198A

DATE: 07/31/2002

TIME: 18:54:20

Input Set : A:\Pto.amc

Output Set: N:\CRF3\07312002\I817198A.raw



1600

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/817,198A

DATE: 07/31/2002  
TIME: 18:41:31

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\07312002\I817198A.raw

4 <110> APPLICANT: YE, Jane et al.  
6 <120> TITLE OF INVENTION: ISOLATED HUMAN RAS-LIKE PROTEINS,  
7 NUCLEIC ACID MOLECULES ENCODING THESE HUMAN RAS-LIKE  
8 PROTEINS, AND USES THEREOF  
10 <130> FILE REFERENCE: CL001188  
12 <140> CURRENT APPLICATION NUMBER: 09/817,198A  
13 <141> CURRENT FILING DATE: 2001-03-27  
15 <160> NUMBER OF SEQ ID NOS: 33  
17 <170> SOFTWARE: FastSEQ for Windows Version 4.0

Does Not Comply  
Corrected Diskette Needed

## ERRORED SEQUENCES

676 <210> SEQ ID NO: 6  
677 <211> LENGTH: 4  
678 <212> TYPE: PRT  
679 <213> ORGANISM: Homo sapien  
681 <400> SEQUENCE: 6  
E--> 682 Asn Ser Ser Lys 1  
684 <210> SEQ ID NO: 7  
685 <211> LENGTH: 4  
686 <212> TYPE: PRT  
687 <213> ORGANISM: Homo sapien  
689 <400> SEQUENCE: 7  
E--> 690 Thr Asp Asn Glu 1  
692 <210> SEQ ID NO: 8  
693 <211> LENGTH: 4  
694 <212> TYPE: PRT  
695 <213> ORGANISM: Homo sapien  
697 <400> SEQUENCE: 8  
E--> 698 Ser Asp Val Asp 1  
700 <210> SEQ ID NO: 9  
701 <211> LENGTH: 9  
702 <212> TYPE: PRT  
703 <213> ORGANISM: Homo sapien  
705 <400> SEQUENCE: 9  
E--> 706 Lys Trp Val Ser Asp Val Asp Glu Tyr 1  
708 <210> SEQ ID NO: 10  
709 <211> LENGTH: 6  
710 <212> TYPE: PRT  
711 <213> ORGANISM: Homo sapien  
713 <400> SEQUENCE: 10  
E--> 714 Gly Val Gly Lys Thr Cys 1

(global errors)  
delete format marker and insert hard return  
partial listing of global errors

same error

same

same

same

5

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/817,198A

DATE: 07/31/2002  
TIME: 18:41:32

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\07312002\I817198A.raw

716 <210> SEQ ID NO: 11  
717 <211> LENGTH: 6  
718 <212> TYPE: PRT  
719 <213> ORGANISM: Homo sapien  
721 <400> SEQUENCE: 11  
E--> 722 Gly Gln Gln Leu Ala Lys 1 5 *Same*  
724 <210> SEQ ID NO: 12  
725 <211> LENGTH: 8  
726 <212> TYPE: PRT  
727 <213> ORGANISM: Homo sapien  
729 <400> SEQUENCE: 12  
E--> 730 Gly Asp Ser Gly Val Gly Lys Thr 1 5 *Same*  
732 <210> SEQ ID NO: 13  
733 <211> LENGTH: 14  
734 <212> TYPE: PRT  
735 <213> ORGANISM: Homo sapien  
737 <400> SEQUENCE: 13  
E--> 738  
Leu Leu Leu Ile Gly Asp Ser Gly Val Gly Lys Thr Cys Leu 1 5 10  
761 <210> SEQ ID NO: 15  
762 <211> LENGTH: 601  
763 <212> TYPE: DNA  
764 <213> ORGANISM: Homo sapien  
766 <400> SEQUENCE: 15  
767 tattaaggga cttgggattc tcccttatct tggcgtgtt tttcagcatt aactaaaact 60  
768 taaaggaaag agttggatgg tcaagaaaag cttttcctt aagtatgcgtt gacagttct 120  
769 caaggaggtt gaaggggcag ccaggagaca aatcaaggag ccaacgaaat gatgtctacc 180  
770 aagtcatagt cattcgctta tttttaaaaa atgcgtgtcc tttatgcctt gctctgcact 240  
771 gagaccgaga gattccaaga tgaataatac ctacagtac ttttctcaaa ttgtgcatta 300  
772 yctaaaacac attacatgac catgctggcc actgatcgag gcaccttcc cagggcttt 360  
773 ttttgtgaat taagaaaaaca aggttaattca ccagttattt ccaagatagt ttggcttctt 420  
774 ggctcatgtt gatatcacctt aggccagttt tactgtgtac tccactttaa 480  
E--> 775  
cggcctgcga tcttcttagag aagaaccgc cagggagcag tgagaggcct ccctggtaga 540 ctgagacact gactgtccct  
777 <210> SEQ ID NO: 16  
778 <211> LENGTH: 601  
779 <212> TYPE: DNA  
780 <213> ORGANISM: Homo sapien  
782 <400> SEQUENCE: 16  
783 atgccaggtt ccatgctaag atttggggac acagtggta ccaaaacaga cagaaaccaa 60  
784 ggagctggct tacattccaa gggagtgcgtt aggaagctgt gtttcatatc agtttctgct 120  
785 ctagtacccc cttttccctt gcagtgcctt ggtctgagaa ggaagatgtt ggtgggtgagg 180  
786 aggtgtgaag cagtgggtt acctgagagg agaggatggg gtggcttgc ctcaaggctt 240  
787 gggccctgc taggtgtcgc tctgccttgc gcctctgtt ctcctccatc cacaggcaca 300  
788 ractcggcctt cccacccctt ccccaaggac atgaccttgg gaaggaacat atctgaagcc 360  
789 cgcggagggt ttccgctgtt gtgcattgtt gccacagatc cgcagatgc cccacagctg 420  
790 ggagcaccgg ttccctccgc ctacctgcac tccctggttt ctgttccttc ctccctcc 480  
E--> 791  
ttccttctcc cccgtccccca gacaggctgg tgatgagctt tataacatga aagctgat 540 ttggccatca tccttctacc  
793 <210> SEQ ID NO: 17  
794 <211> LENGTH: 601  
795 <212> TYPE: DNA